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A New Species of Lizard from Mexico

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ABSTRACT: A species of skink, *Eumeces indubitus*, is described, related to *E. dugesi*, but differing in the character of the supraoculars and in color. The habitat of the species is the Mexican states of Michoacan, Mexico, and Morelos.

AMONG the lizards obtained in southern Mexico in the summer of 1932, by Hobart Smith and myself, is a medium-sized skink belonging to the genus *Eumeces*, which appears to be new to science. The form is represented in the collection by a series of thirty-three specimens, all from the southern part of the Mexican highland.

This southern Mexican region is of especial interest to the herpetologist, since the fauna, especially the lacertilian part of it, is rich and varied. Many of the genera are of the plastic type, and these register, as external scale and color characters, the effects of the environment.

Many species, too, seem to be of limited distribution. The fauna is such as to suggest a condition as might obtain if the species from a wide territory were herded together and driven into a much smaller territory by some impelling environmental factor. In Mexico in the region south of the Tropic of Cancer are to be found not less than a dozen species of the genus *Eumeces*, representing most of the principal groups of the genus.

Eumeces indubitus sp. nov.

Type. No. 1731, Taylor-Smith collection: Collected July 9, 1932, on the Mexico-Cuernavaca highway, about forty miles south-east of Mexico City (kilometer 63), by Edward H. Taylor and Hobart Smith.

Diagnosis. A medium-sized, robust species; four supraoculars, the three anterior in contact with the frontal; the parietals inclosing small interparietal; one postmental; no postnasal; the subcaudals distinctly widened; seven upper labials, seven superciliaries; the seventh upper labial broadly in contact with the upper secondary temporal; primary temporal small, widely separated from lower secondary or tertiary; 24 scale rows about middle of body; 57 to 61 scales from occiput to above anus. Limbs moderately large, but failing to touch, even in young, when adpressed. Color above, olive to olive-brown with a short dorsolateral light line from rostral, the line disappearing on the shoulder; a narrow labial light line terminating at ear; no median light line or forking lines on the head.

Description of the Type. Adult male. Portion of rostral visible above, equal to about half the size of the frontonasal; internasals large, broadly in contact; frontonasal hexagonal, forming sutures with the loreals, and narrowly in contact with the frontal, forming its longest sutures with the prefrontals; later narrowly separated, forming sutures with first superciliary, both loreals and the anterior supraocular; frontal longer than its distance from the end of the snout, obtusely angular anteriorly, somewhat rounded posteriorly, somewhat narrowed in the middle, and only a little wider in the anterior part than in the posterior; four supraoculars, the anterior longer than wide with an area scarcely less than the fourth, the three anterior bordering the frontal; the frontoparietals larger than prefrontals, their common suture less than half their length; interparietal short and broad, inclosed behind by the parietals which are more than twice as long as their greatest width; two pairs of nuchals, the anterior somewhat the larger; nasal of moderate size, divided, the anterior part not as large as the posterior part with nostril; anterior loreal distinctly higher than long, higher than the posterior, which is considerably longer than high; seven superciliaries, the anterior less than one and one-half the size of the second; two subequal presuboculars; four posterior suboculars; primary temporal less than one-fourth the size of the upper secondary temporal; latter very broadly in contact with the seventh labial, the suture

more than half its length; seven upper labials, four preceding the subocular, which is low and elongate; seventh nearly double the size of the sixth and separated from the ear by a pair of small postlabials; tertiary temporal (the lower secondary presumably wanting) small; ear surrounded by 16 scales, the opening no larger than the first upper labial; six lower labials, the last elongate; mental large, deep, with a distinctly larger labial border than rostral; one azygous postmental; three pairs of chinshields, only one in contact; the postgenial large, bordered on its anterior inner edge by a scale wider than long; eye small, the lower eyelid with four or five enlarged opaque scales separated from the suboculars by at least three rows of granules; two or three median palpebral scales directly in contact with superciliaries, others separated by small granular scales. Scales on the dorsal surface and sides about equal in size, 24 rows about the middle of the body; 29 rows about neck behind ear; 30 about the constricted portion of the neck; 30 about body in axillary region; 15 rows about the base of the tail; 57 scales from occiput to above the anus; scales under the tail two and one-half to three times as broad as long; preanal scales large, broad, with two small, scarcely differentiated, scales on each side, the outer overlapping inner; lateral postanal scale not or scarcely differentiated; scales behind ear, about insertion of arm and in axillary region, on posterior side of femur, behind insertion of hind limbs, and along side of anus, with numerous distinct pits; two small auricular lobules.

Legs moderately large, separated when adpressed by a length of three or four scales; a very small area of granular axillary scales; wrist tubercle flat, well differentiated; several larger rounded tubercles on palm mixed with smaller tubercles; lamella formula, 5 : 8 : 11 : 10 : 7. Heel bounded by five large, flattened, tubercular scales, contiguous or overlapping one or two differentiated tubercles on sole; lamella formula, 5 : 9 : 11 : 13 : 9. Terminal lamella on toes not tightly bound about claws; no intercalated series of scales along the side of the fourth toe.

Color in Life. Above a light olive-brown, the head somewhat browner; darker flecks in the median part of each scale, more prominent posteriorly and tending to form dotted darker lines; a dorso-lateral cream line, bordered on its inner edge with black, begins on rostral and continues on the side of the head and neck, but loses its identity on the shoulder; the two median scale rows are a shade darker than the two adjoining rows on each side; beginning on the

side of the head is a dark blackish or blackish-brown stripe, the color not uniform; each scale with light bronze areas, the black concentrated on the anterior part of the scales and tending to form an indistinct line on each scale row; a cream line beginning on the rostral passes along the lower edge of the first four labials and through the middle of the last three, the edges of the line clearly demarcated, terminates in the lower anterior corner of the ear; below the dark lateral stripe the ground color is grayish, and the scales have darker areas forming two or three very indistinct, dotted lines; lower labials light, bordered with darker; chin, lower side of neck and breast light, a few of the scales with darker flecks; hind legs darker than forelegs, each scale with lighter flecking; tail bluish gray, lavender blue below; lamellæ under toes dark.

Variation. The table, giving data from a part of the series available, shows the principal variation of this species as regards measurements and scale variation.

The number of scale rows is 24 save in two cases where there are but 22 rows; the number of upper labials is constantly 7; one specimen shows the third and fourth partially fused on one side. Only a single specimen shows the parietals separated, and this only very narrowly. Scales about the ear vary from 15 to 18, the numbers 15 and 16 most frequent; the higher numbers rarely occur. The scales from occiput to above anus vary from 57 to 61, 59 being twice as frequent as the other numbers. One postmental and no postnasal seem to be invariable characters. The seventh labial is invariably the largest, frequently double the size of the sixth; subdigital lamellæ under fourth toe 11-14, 12 and 13 being the most usual number. The number of the supraoculars is invariable. The temporals are surprisingly stable in character.

In color, the ground color varies in shade from darker to lighter. In younger specimens the color on the dark lateral stripe may be uniformly black. The character of the light lines does not vary, and is identical in the very young (31 mm.) and in adults. In the young the tail is a bright blue, and this color is usually retained by the adults, but with blackish or gray flecks breaking the uniformity. There is no trace of a lateral line from behind the ear along the side. The head in the young is never black. The dotted dark dorsal lines are more distinct in some specimens than in others.

Relationship. The relationship of this species is with *Eumeces dugesi*, despite the very striking difference in the character of the scales of the top of the head. It shows a parallel development with

Measurements and scale counts in *Eumeces inductus* sp. nov.

Number.....	3593	1731	1671	1725	1728	1673	3508	1697	3600	1724	1696
Sex.....	♂	♂	♀	♂	♀	♂	♀	♀	♀	.....	.....
Snout to vent.....	66	64	62	64	64	63.5	58	54	41	37	32
Tail.....	108	.....	.....	105	.....	.....	.....	.....	66	57	47
Snout to forelimb.....	22	20.5	19	20	18	20	18	19	14	13	12
Axilla to groin.....	37	36	38	40	- 43	39	34	31	28	23	19
Width of head.....	11	10	10	10	9	9.8	8.4	8.2	7	7	6
Length of head.....	12	10.8	9.5	10	9.3	9.5	8.6	9.1	8	7.3	7
Width of body.....	13	12	12	13	12	12	10	10	8	7	6
Foreleg.....	15	13	12.2	12	12	14	11	12	9.5	8.5	8
Hind leg.....	20.2	19	17	18	18	19	15	15	12	11	10
Scale rows, body.....	24	24	24	24	24	24	24	24	24	22	22
Scales occiput to above anus.....	57	56	59	59	61	60	59	58	59	59	59
Upper labials.....	7	7	7	7	7	7	7	7	7	7	7
Supraoculars.....	4	4	4	4	4	4	4	4	4	4	4
Nuchals pairs.....	2	2	2	3	2	2	2	2	2½	2	2
Postmentals.....	1	1	1	1	1	1	1	1	1	1	1
Postnasals.....	0	0	0	0	0	0	0	0	0	0	0
Largest labial.....	7	7	7	7	7	7	7	7	7	7	7
Frontonasal touch frontal.....	Yes	Yes	Yes	No	No	No	Yes	No	Yes	No	No
Supraoculars touch frontal.....	3	3	3	3	3	3	3	3	3	3	3-2
Seventh labial touches upper sec. temporal.....	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

that which has taken place in the *lynxe* group. *Furcistrostris* with three supraoculars stands to *lynxe* as *dugesii* does to *indubitus*. However, it appears that in the two latter the different characters have become stabilized.

This new form may readily be separated from *Eumeces dugesii* by the character of four supraoculars, three touching the frontal, instead of three supraoculars, with only two touching the frontal. The contrast of color between the dorsal surface and the sides is much more pronounced in *dugesii* than in *indubitus*; the former often becomes yellowish bronze, and even silvery above. In all the specimens examined, thirty-three in all, there is no evidence that the characters separating the two forms overlap or intergrade.

The species may be more distantly related to *Eumeces brevirostris* Günther as suggested by the presence of a large seventh labial which makes contact with the upper secondary temporal.

Remarks. The present known distribution of this form is the Mexican states of Morelos, Mexico, and Eastern Michoacan. So far as is known, it is a high mountain form, as all specimens taken were found in the mountains in pine forest, under rocks or logs.

The food of this species, judged by stomach contents, consists wholly of small insects. An examination of the reproductive organs gave no clue as to whether the form is oviparous or ovoviviparous, since neither the ovaries nor uteri contained developing eggs. It is highly probable, however, that this, like its close relatives, *dugesii*, is ovoviviparous.

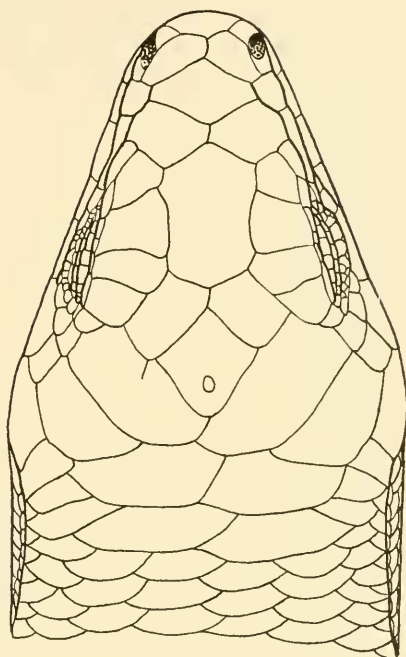
A single paratype (No. 1672) was presented to the Instituto de Biologia in Mexico City.

PLATE XXIV

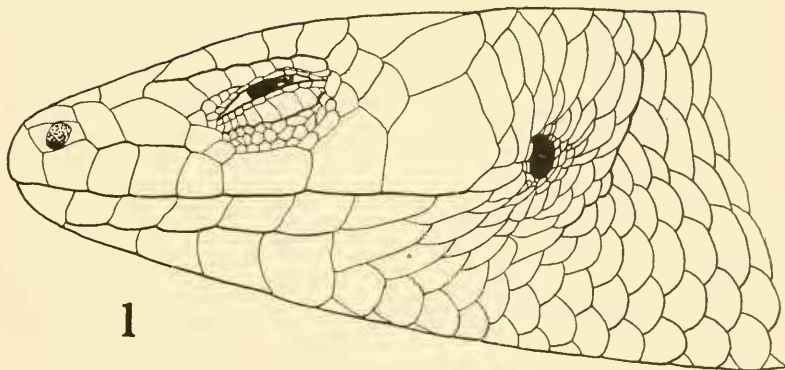
FIG. 1. Enlarged drawing, lateral view of head of *Eumeces indubitus* sp. nov. (No. 1727, E. H. T. and H. S. Collection), which shows slight variation in scale characters from the type. Actual length of head, snout to end of parietals, 10 mm.

FIG. 2. Same, dorsal view.

PLATE XXIV



2



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PLATE XXV

FIG. A. Photograph of *Eumeces indubitus* (No. 1674, E. H. T. and H. S. Collection) from type locality. About actual size.

FIG. B. Photograph of the type specimen, about actual size.

PLATE XXV

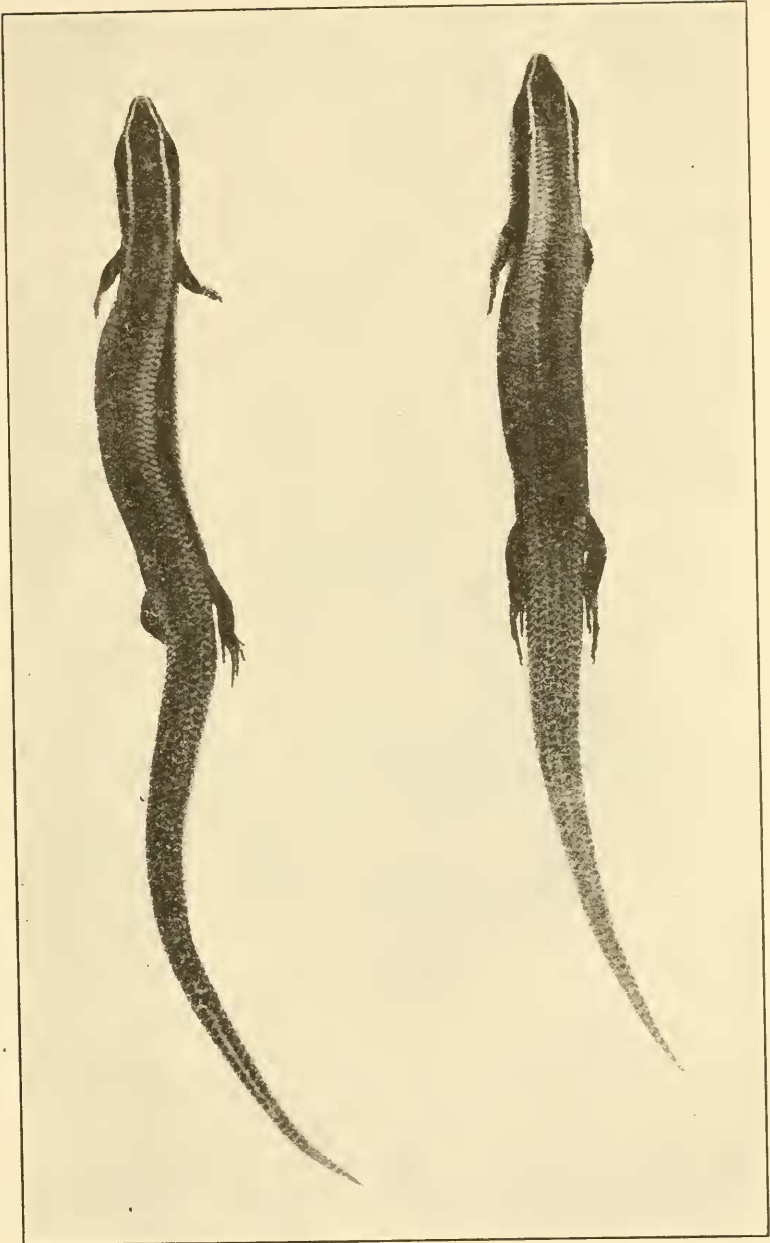


FIG. A.

FIG. B.